

THE AMERICAN GENERA OF ASILIDAE (DIPTERA): KEYS FOR IDENTIFICATION WITH AN ATLAS OF FEMALE SPERMATHECAE AND OTHER MORPHOLOGICAL DETAILS. VII. 6. SUBFAMILY STENOPOGONINAE HULL - TRIBES PHELLINI, PLESIOMMATINI, STENOPOGONINI AND WILLISTONININI<sup>1</sup>.

*LOS GENEROS AMERICANOS DE ASILIDAE (DIPTERA): CLAVES PARA SU IDENTIFICACION CON UN ATLAS DE LAS ESPERMATECAS DE LAS HEMBRAS Y OTROS DETALLES MORFOLOGICOS. VII. 6. SUBFAMILIA STENOPOGONINAE HULL - TRIBUS PHELLINI, PLESIOMMATINI, STENOPOGONINI Y WILLISTONININI.*

Jorge N. Artigas<sup>2</sup> and Nelson Papavero<sup>3</sup>

ABSTRACT

The Neotropical Phellini are represented by one genus and two species; the Plesiommatini by 3 genera and 17 species; the Stenopogonini by 3 genera and 39 species; the Willistoninini include a single genus, with exclusively Nearctic species. Illustration of the spermathecae of some of these genera are given

KEYWORDS: Insecta. Taxonomy. America. Key. Asilidae. Stenopogoninae. Phellini. Plesiommatini. Stenopogonini. Willistoninini.

RESUMEN

Los Phellini neotropicales están representados por 1 género y 2 especies; los Plesiommatini por 3 géneros y 17 especies; los Stenopogonini por 3 géneros y 39 especies; los Willistoninini incluyen un único género con especies exclusivamente neárticas. Las espermathecas de algunos de estos géneros son ilustradas.

PALABRES CLAVES: Insecta. Taxonomía. América. Clave Asilidae. Stenopogoninae. Phellini. Plesiommatini. Stenopogonini. Willistoninini.

INTRODUCTION

This is part VII.6 of a series of papers intended as an effort to define the American genera of Asilidae, with the description of new genera found in the collections of the Museu de Zoologia da Universidade de São Paulo and of the Departamento de Zoología de la Universidad de Concepción.

Previous instalments of this series were published as follows:

Part I (Key to subfamilies, Leptogastrinae): Gayana Zool., 52(1-2): 95-114, 1988.

Part II (Dasypogoninae): Gayana Zool., 52(3-4): 199-260, 1988.

Part III (Trigonimiminae): Bol. Soc. Biol. Concepción, 60: 35-41, 1989.

Part IV (Laphriinae, except Atomosini): Bol.

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<sup>2</sup> Universidad de Concepción-Fac. Cs. Naturales y Oceanográficas. Depto. Zoología (MZUC). Proyecto Dirección de Investigación. U. de Concepción N° 203812. Proyecto FONDECYT N° 92-0289.

<sup>3</sup> Museu de Zoologia & Instituto de Estudos Avançados, Universidad de São Paulo. Pesquisador do Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq, Proc. N° 30.0994/79).

Mus. paraense Emilio Goeldi, Zool., 4(2): 211-255, 1989.

Part V (Stichopogoninae): Bol. Soc. Biol. Concepción, 61: 39-47, 1990.

Part VI (Laphriinae (Atomosiini)): Gayana Zool., 55(1): 53-85, 1991.

Part VII.1 (Stenopogoninae, key to tribes): Gayana Zool., 55(2): 139-144, 1991.

Part VII.2 (Stenopogoninae: tribes Acronychini, Bathypogonini, Ceraturgini): Gayana Zool., 55(3): 247-255, 1991.

Part VII.3 (Stenopogoninae: tribes Dioctrini, Echthodopini): Gayana Zool., 55(4): 261-266, 1991.

Part VII.4 (Stenopogoninae: tribe Enigmomorphini): Bol. Soc. Biol. Concepción, 62: 27-53, 1991.

Part VII.5 (Stenopogoninae: tribe Tillobromini): Rev. Chilena Ent., 19: 17-27, 1991.

Part VII.7 (Stenopogoninae: tribe Cyrtopogonini): Bol. Soc. Biol. Concepción, 62: 55-81, 1991.

The methodology employed in the dissection

and preservation of the male terminalia, female spermathecae and other morphological parts is the same employed by Artigas (1971).

Tribe PHELLINI Hull

Genus *Obelophorus* Schiner

*Obelophorus* Schiner, 1866: 672 (1868: 167, second erection of genus). Type-especies, *Dasypogon terebratus* Macquart (orig. des.).

Ref. - Artigas, 1970: 146-150, figs. 28-33, 476; 1971: figs. 23, 25 (spermathecae).

*landbecki* (Philippi), 1865: 686, pl. 25, fig. 24 (*Dasypogon*). Type-locality: Chile, Valdivia, Colchagua. Distr.- Chile (Arauco, Concepción, Maule, Ñuble, O'Higgins, Valdivia).

*terebratus* (Macquart), 1850: 370 (1850: 66), pl. 6, fig. 11 (*Dasypogon*). Type-locality: "Chile". Distr.- Chile (O'Higgins, Santiago, Valparaíso).

Tribe PLESIOMMATINI Artigas & Papavero

Key to genera:

- 1. Face triangular in profile, moderately produced at oral margin. Oral margin distinctly oblique. Mystax in one to three rows, limited to lower margin of face. Proboscis extending slightly beyond face..... 2
- Face strongly produced and convex. Oral margin almost horizontal. Mystax in several rows, extending to base of antennae. Proboscis short, almost not extending beyond face. Spermathecae as in Figs. 1-2 (Mexico to Uruguay, but not in Chile) ..... *Cystoprosopa* Hull, 1961
- 2(1) Mystax in only one row, wiht scattered bristles. Scape not thickened. Relatively bae, medium-sized flies. Spermathecae as in Figs. 3-4 (Neotropical, but not in Chile) ..... *Plesiomma* Macquart, 1838
- Mystax in 2-3 rows, occupying lower half of face. First antennal segment thickened, heavily pilose. Small to medium-sized, slender, pilose flies (Dominican Republic, Haiti) ..*Dapsilochaetus* Hull, 1962

Genus *Cystoprosopa* Hull, n. status

*Plesiomma*, subg. *Cystoprosopa* Hull, 1962: 221.

Type-species, *sepia* Hull (orig. des.).

*semirufa* (Wiedemann), 1828: 393 (*Dasypogon*).

Type-locality: "Brazil" (i.e., Uruguay, Montevideo). N. COMB.

*sepia* (Hull), 1962: 221 (*Plesiomma*). Type-local-

ity: Mexico, Morelos, Alpuyecá. N. COMB.

Genus *Dapsilochaetus* Hull, n. status

*Plesiomma*, subg. *Dapsilochaetus* Hull, 1962: 219. Type-species, *inflatum* Hull (orig. des.).

*inflatus* (Hull), 1962: 219 (*Plesiomma*). Type-locality: Haiti, Mount Basil, 4700 ft. Distr.-Dominican Republic, Haiti. N. COMB.

Genus *Plesiomma* Macquart

*Plesiomma* Macquart, 1838: 54 (1839: 170). Type-species, *testaceum* Macquart (Back, 1909: 306) = *caedens* (Wiedemann).

*Dolichodes* Macquart, 1838: 49 (1839: 165). Type-species, *ferrugineus* Macquart (orig. des.).

*Plesiomma* Schiner, 1866: 702, error. *Plesiomma*, subg. *Boropis* Hull, 1962: 219. Type-species, *Asilus lineatus* Fabricius (orig. des.).

*atrum* Bromley, 1929: 45. Type-locality: Mexico, Veracruz, Coatepec.

*caedens* (Wiedemann), 1828: 584 (*Dasypogon*). Type-locality: "Brazil".

*testaceum* Macquart, 1838: 55 (1839: 171), pl. 5, fig. 2. Type-locality: unknown.

*ferrugineum* (Macquart), 1838: 49 (1839: 165), pl. 4, fig. 1 (*Dolichodes*). Type-locality: "Brazil".

*jungens* Schiner, 1867: 375. Type-locality: "Brazil". N. SYN.

*fuliginosum* (Wiedemann), 1821: 218

(*Dasypogon*). Type-locality: "Brazil". *caminarius* Wiedemann, 1828: 585 (*Dasypogon*).

Type-locality: unknown. N. SYN.

*nigrum* Macquart, 1838: 55 (1839: 171). Type-locality: "Brazil".

*funestum* Loew, 1861: 35 (Cent. 7, nº 31). Type-locality: "Cuba".

*lugubris* Jaennicke, 1867: 365 (*Dioctria*). Type-locality: "Cuba".

*haemorrhoun* (Fabricius), 1805: 161 (*Laphria*). Type-locality: "South America"

*indecorum* Loew, 1866: 19 (Cent. 7, nº 33). Type-locality: "Cuba".

*longiventris* Schiner, 1867: 375. Type-locality: "Cuba".

*leptogaster* (Perty), 1833: 180, pl. 36, fig. 2 (*Laphria*). Type-locality: Brazil, Bahia

*lineatum* (Fabricius), 1781: 465 (*Asilus*). Type-locality: "West Indies".

*macrum* Loew, 1861: 35 (Cent. 7, nº 34). Type-locality: "Cuba".

*loewi*, nom. nov. for *leptogaster* Loew. *leptogaster* Loew, 1866: 18 (preocc. Perty, 1833).

Type-locality: "Cuba".

*salti* Bromley, 1929: 277. Type-locality: Cuba, Soledad.

*testaceum* (Fabricius), 1805: 167 (*Dasypogon*). Type-locality: "America meridionali".

*unicolor* Loew, 1866: 20 (Cent. 7, nº 35). Type-locality: USA, New Mexico.

(?*Dapsilochaetus*).

Unplaced Plesiommatini

*angustus* Macquart, 1848: 20 (1848: 180), pl. 1, figs. 11, 11a (*Dasypogon*). Type-locality: "Haiti".

Tribe STENOPOGONINI Hull

Key to genera:

- 1. Katatergite without hairs or bristles. Spermathecae as in Figs. 5-6 ..... *Stenopogon* Loew, 1847
- Katatergite with hairs, bristles, or both ..... 2
- 2(1) First flagellomere less than 1.75 times combined length of scape and pedicel together; scape 1-1.5 times length of pedicel; second and third flagellomeres forming an apically pointed stylus, with a short spine at apex. Wing usually hyaline. Two or more anterior dorsocentral bristles. Spermathecae as in Figs 7-8 ..... *Scleropogon* Loew, 1866

First flagellomere two or more times combined length of scape and pedicel together; scape twice or more as long as pedicel; second and third flagellomeres absent, or, if present, truncate at apex, with spine arising from pit. Wing usually brown. No anterior dorsocentral bristles. Spermathecae as in Figs 9-10 ..... *Ospriocerus* Loew, 1866

Genus *Ospriocerus* Loew

*Ospriocerus* Loew, 1866: 29 (Cent. 7, n° 51). Type-species, *Dasypogon aeacus* Wiedemann (Buck, 1909: 184) = *abdominalis* (Say).

*abdominalis* (Say), 1824: 375 (1859: 255) (*Asilus*). Type-locality: USA, Northwest Territory. Distr.- USA, Mexico (Coahuila, Chihuahua, Durango, Nuevo León, San Luis Potosí).

*aeacus* Wiedemann, 1828: 390 (*Dasypogon*), nom. nov. for *abdominalis* Say, when preocc. in *Dasypogon*.

*spathulatus* Bellardi, 1861: 182 (82), pl. 1, fig. 9 (*Dasypogon*). Type-locality: "Mexico".

*aeacides* Loew, 1866: 29 (Cent. 7, n° 51). Type-locality: USA, California.

*ventralis* Coquillett, 1898: 37. Type-locality: USA, Arizona.

*alamoensis* Martin, 1968b: 409, figs. 17, 50, 60. Type-locality: Mexico, Sinaloa, Elota.

*arizonensis* (Bromley), 1937: 305 (*Stenopogon*). Type-locality: USA, New Mexico, Albuquerque. Distr.- USA, Mexico (Sonora, Chihuahua).

*diversus* Williston, 1901: 303, pl. 5, fig. 16. Type-locality: Mexico, Guerrero, Venta de Zopilote. Distr.- Mexico (Guerrero, Oaxaca).

*evansi* Martin, 1968b: 413, figs. 16, 51, 64. Type-locality: Mexico, Guerrero, Iguala. Distr.- Mexico (Morelos, Guerrero).

*latipennis* (Loew), 1866: 28 (Cent. 7, n° 49) (*Stenopogon*). Type-locality: USA, New Mexico. Distr.- USA, Mexico (Tamaulipas).

*longulus* (Loew), 1866: 28 (Cent. 7, n° 50) (*Stenopogon*). Type-locality: USA, New Mexico. Distr.- USA, Mexico (Chihuahua, Tamaulipas, San Luis Potosí).

*minos* Osten Sacken, 1887: 291. Type-locality: Mexico, Sonora. Distr.- USA, Mexico (Sonora).

*nitens* (Coquillett), 1904: 34 (*Stenopogon*). Type-locality: USA, Texas. Distr.- USA, Mexico (Tamaulipas).

*monki* Bromley, 1934: 225. Type-locality: USA, Texas.

*painterorum* Martin, 1968b: 417, figs. 25, 37. Type-locality: Mexico, Coahuila, 58 mi. n Monclova.

*sinaloensis* Martin, 1968b: 418, figs. 27, 43. Type-locality: Mexico, Sonora, Navjoa. Distr.- Mexico (Coahuila, Sonora).

*tenebrosus* (Coquillett), 1904: 33 (*Stenopogon*). Type-locality: USA, Texas, Brownsville. Distr.- USA, Mexico (Chihuahua).

*tequilae* Martin, 1968b: 419, figs. 4-5, 46, 60. Type-locality: Mexico, Jalisco, Tequila. Distr.- Mexico (Jalisco, Nayarit, Sinaloa, Oaxaca, Campeche).

*youngi* Martin, 1968b: 421, figs. 20, 36. Type-locality: Mexico, Tamaulipas, Monté, 800 feet.

Genus *Scleropogon* Loew

*Scleropogon* Loew, 1866: 26 (Cent. 7, n° 45). Type-species, *picticornis* Loew (orig. des.).

*duncani* (Bromley), 1937: 307 (*Stenopogon*). Type-locality: USA, New Mexico, Silver City. Distr.- USA, Mexico (Sonora).

*indistinctus* (Bromley), 1937: 308 (*Stenopogon*). Type-locality: USA, Arizona, White Mts. Distr.- USA, Mexico (Zacatecas, Chihuahua, Tamaulipas).

*lugubris* Williston, 1901: 304. Type-locality: Mexico, Guerrero, Dos Arroyos.

*oaxacensis* (Martin), 1968a: 390, fig. 4 (*Stenopogon*). Type-locality: Mexico, Oaxaca, El Camarón.

*petilus* (Martin), 1968a: 302, figs. 11, 18, 30 (*Stenopogon*). Type-locality: Mexico, Sonora, Guaymas.

*texanus* (Bromley), 1931: 431 (*Stenopogon*). Type-locality: USA, Texas, Dilley. Distr.- USA, Mexico (Tamaulipas).

Genus *Stenopogon* Loew

*Dasypogon*, subg. *Stenopogon* Loew, 1847: 453. Type-species, *Asilus sabaudus* Fabricius

(Coquillett, 1904: 179).

- albalulus* Martin, 1968a: 374. Type-locality: Mexico, Michoacán, Apatzingán.
- arnaudi* Martin, 1968a: 375, figs. 13, 22. Type-locality: Mexico, Baja California, Sierra San Pedro Mártir, Rancho Viejo, 7000 ft.
- colimae* Martin, 1968a: 377, fig. 16. Type-locality: Mexico, Colima, Vulcano.
- dorothyae* Martin, 1968a: 378, fig. 26. Type-locality: Mexico, Guerrero, Chilpancingo. Distr.- Mexico (Guerrero, Morelos, Oaxaca).
- elizabethae* Martin, 1968a: 379, figs. 15, 20, 33. Type-locality: Mexico, Chihuahua.
- flavotibialis* Martin, 1968a: 380, figs. 8, 31. Type-locality: Mexico, Baja California, Sierra San Pedro Mártir, La Grulla, 6900 ft.
- fuscolimbatus* Bigot, 1878: 421. Type-locality: "Mexico".
- galbinus* Martin, 1968a: 385, fig. 24. Type-locality: "Mexico".
- hamus* Martin, 1968a: 385, fig. 1. Type-locality: Mexico, Baja California, Sierra San Pedro Mártir, La Grulla, 6900 ft.
- hiemalis* Martin, 1968a: 386, fig. 29. Type-locality: Mexico, Tangola Bay.
- nigrolimbatus* Martin, 1968a: 389, fig. 9. Type-locality: Mexico, Nuevo León, Galeana.
- ortegai* Martin, 1968a: 391, figs. 10, 28, 32. Type-locality: Mexico, Guerrero, Chilpancingo, 1600 ft.
- rossi* Martin, 1968a: 393, fig. 2. Type-locality: Mexico, Baja California, Coyote Cove, Concepción Bay.
- silaceus* Martin, 1968a: 394, figs. 5, 23, 35. Type-locality: Mexico, Guanajuato, Celaya.
- stonei* Bromley, 1937: 298. Type-locality: Mexico, Baja California, Ensenada.
- subrufus* Martin, 1968a: 395, figs. 12, 19. Type-locality: Mexico, Guerrero, Mexcala.
- truquii* (Bellardi), 1861: 176. pl. 1, fig. 10 (*Dasypogon*). Type-locality: "Mexico". Distr.- Mexico (Morelos, Veracruz).
- xochimilcae* Martin, 1968a: 396, figs. 6, 25. Type-locality: Mexico, Distrito Federal, Xochimilco. Distr.- Mexico (D.F., Jalisco).
- zebra* Martin, 1968a: 397, figs. 7, 27, 34. Type-locality: Mexico, Guerrero, Chilpancingo.

Tribe WILLISTONININI Artigas & Papavero

Only one genus: Willistonina Back, 1909.

Spermathecae as in Figs. 11-12.

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## INDEX

abdominalis (Say), 1824 (Asilus), *OsPRIOCERUS*  
*aeacides* Loew, 1866 *OsPRIOCERUS*  
*aeacus* (Wiedemann), 1828 (Dasypogon),  
*OsPRIOCERUS*  
*alamoensis* Martin, 1968, *OsPRIOCERUS*  
*albalulus* Martin, 1968, *Stenopogon*  
*angustus* Macquart, 1848 (Dasypogon)  
*arizonensis* (Bromley), 1937 (Stenopogon),  
*OsPRIOCERUS*  
*arnaudi* Martin, 1968, *Stenopogon*  
*atrum* Bromley, 1929, *Plesiomma*

*Boropsis* Hull, 1962

caedens (Wiedemann), 1828 (Dasypogon),  
*Plesiomma*  
*caminarius* (Wiedemann), 1828 (Dasypogon),  
*Plesiomma*  
*colimae* Martin, 1968, *Stenopogon*  
*Cystoprosopa* Hull, 1962

*Dapsilochaetus* Hull, 1962  
*diversus* Williston, 1901, *OsPRIOCERUS*  
*Dolichodes* Macquart, 1838  
*dorothyae* Martin, 1968, *Stenopogon*  
*duncani* (Bromley), 1937 (Stenopogon),  
*Scleropogon*

*elizabethae* Martin, 1968, *Stenopogon*  
*evansi* Martin, 1968, *OsPRIOCERUS*

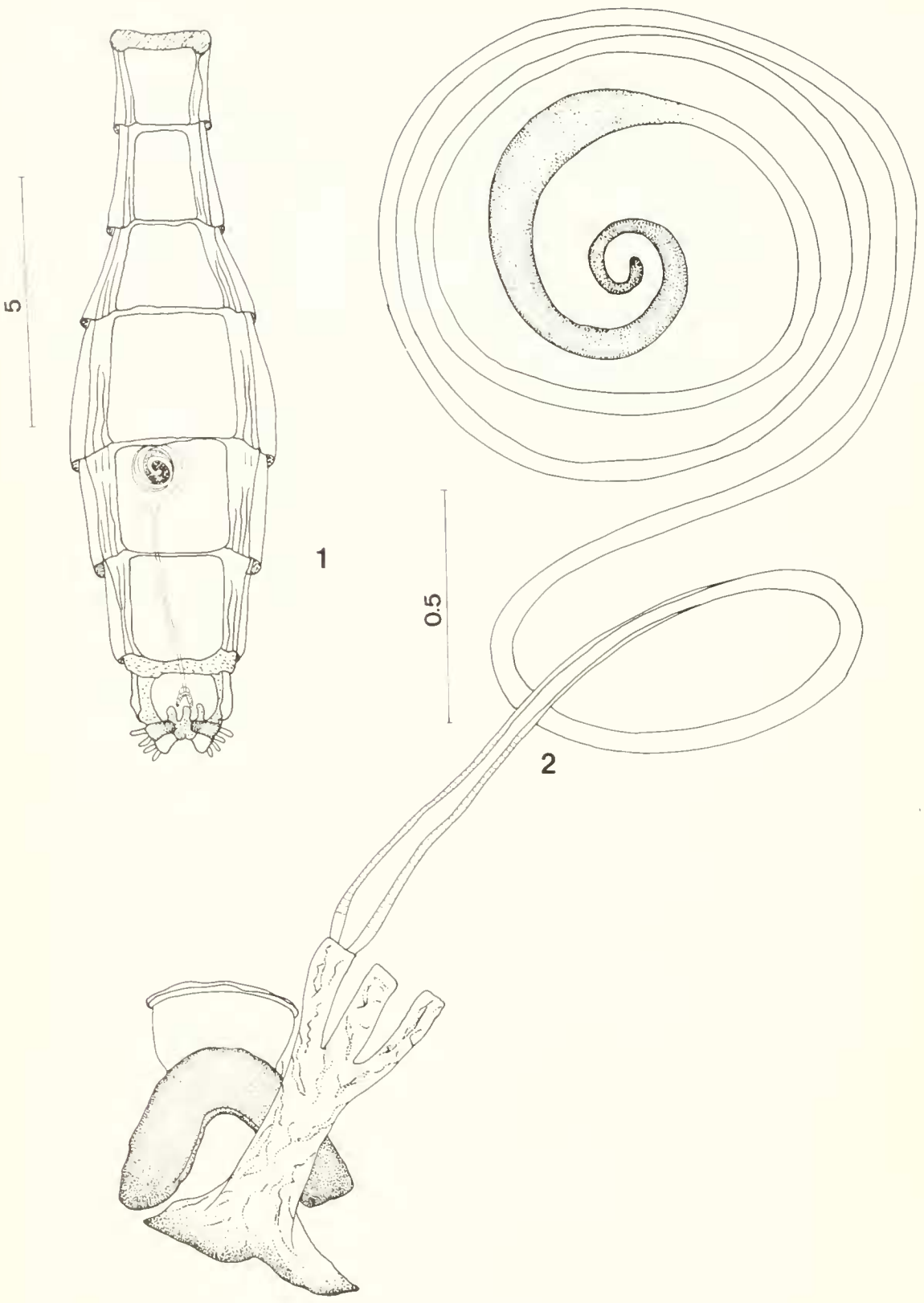
*ferrugineum* (Macquart), 1838 (Dolichodes),  
*Plesiomma*  
*flavotibialis* Martin, 1968, *Stenopogon*  
*fuliginosum* (Wiedemann), 1821 (Dasypogon),  
*Plesiomma*  
*funestum* Loew, 1861, *Plesiomma*  
*fuscolimbatus* Bigot, 1878, *Stenopogon*

*galbinus* Martin, 1968, *Stenopogon*  
*haemorrhoum* (Fabricius), 1805 (Laphria),  
*Plesiomma*  
*hamus* Martin, 1968, *Stenopogon*  
*hiemalis* Martin, 1968, *Stenopogon*

*indecorum* Loew, 1866, *Plesiomma*  
*indistinctus* (Bromley), 1937 (Stenopogon),  
*Scleropogon*  
*inflatus* (Hull), 1962 (*Plesiomma*), *Dapsilochaetus*

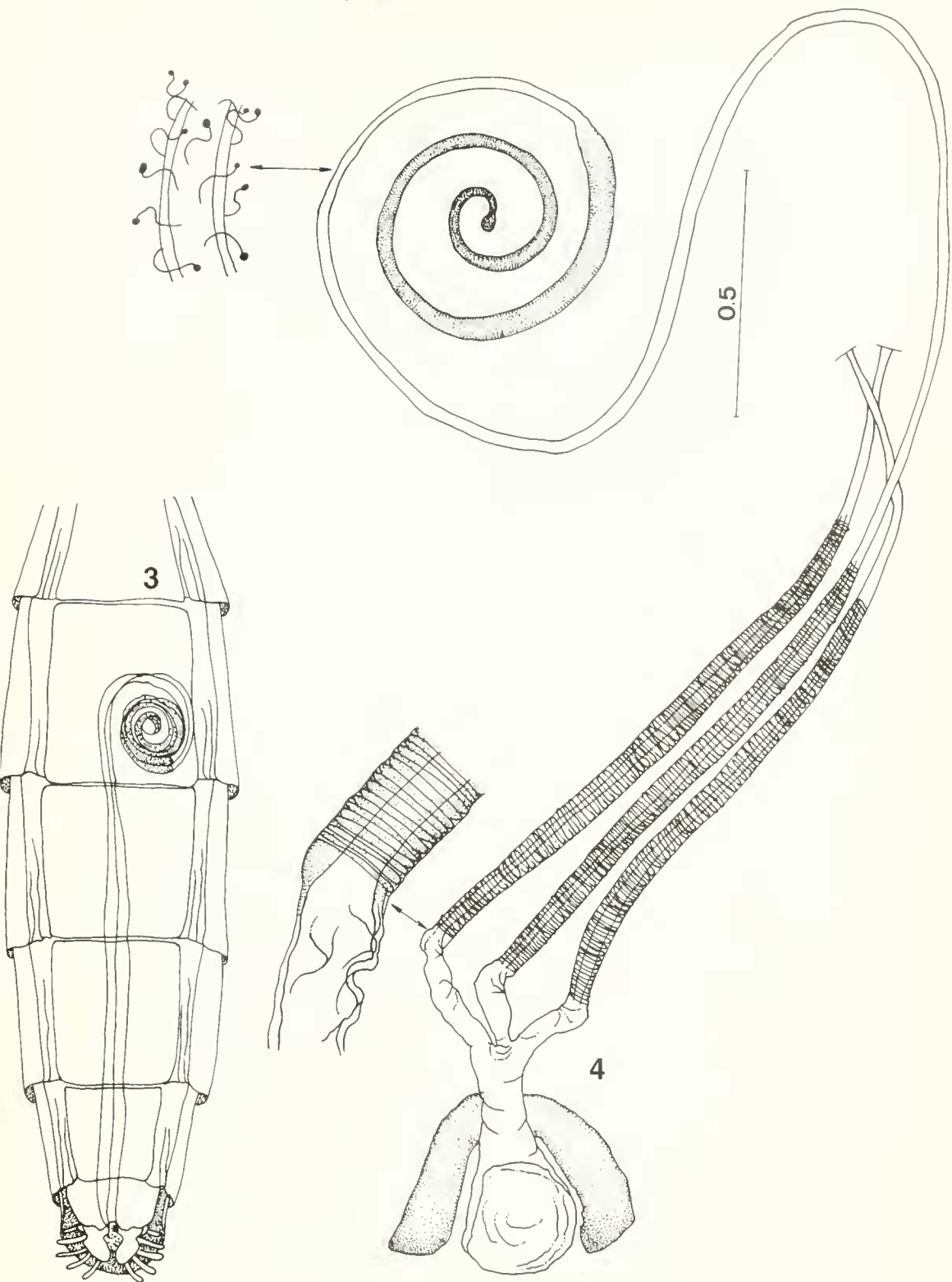
*jungens* Schiner, 1867, *Plesiomma*

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| <i>landbecki</i> (Philippi), 1865 (Dasypogon), Obelophorus              | <i>Scleropogon</i> Loew, 1866                                        |
| <i>latipennis</i> (Loew), 1866 (Stenopogon), <i>Ospriocerus</i>         | <i>semirufa</i> (Wiedemann), 1828 (Dasypogon), <i>Cystoprosopa</i>   |
| <i>leptogaster</i> (Perty), 1833 (Laphria), <i>Plesiomma</i>            | <i>sepia</i> (Hull), 1962 ( <i>Plesiomma</i> ), <i>Cystoprosopa</i>  |
| <i>lineatum</i> (Fabricius), 1781 ( <i>Asilus</i> ), <i>Plesiomma</i>   | <i>silaceus</i> Martin, 1968, <i>Stenopogon</i>                      |
| <i>loewi</i> , nom. nov., <i>Plesiomma</i>                              | <i>sinaloensis</i> Martin, 1968, <i>Ospriocerus</i>                  |
| <i>longiventris</i> Schiner, 1867, <i>Plesiomma</i>                     | <i>spathulatus</i> (Bellardi), 1861 (Dasypogon), <i>Ospriocerus</i>  |
| <i>longulus</i> (Loew), 1866 (Stenopogon), <i>Ospriocerus</i>           | <i>Stenopogon</i> Loew, 1847                                         |
| <i>lugubris</i> (Jaennicke), 1867 ( <i>Dioctria</i> ), <i>Plesiomma</i> | <i>Stenopogonini</i>                                                 |
| <i>lugubris</i> Williston, 1901, <i>Scleropogon</i>                     | <i>stonei</i> Bromley, 1937, <i>Stenopogon</i>                       |
| <i>macrum</i> Loew, 1861, <i>Plesiomma</i>                              | <i>subrufus</i> Martin, 1968, <i>Stenopogon</i>                      |
| <i>minos</i> Osten Sacken, 1887, <i>Ospriocerus</i>                     | <i>tenebrosus</i> (Coquillet), 1904 (Stenopogon), <i>Ospriocerus</i> |
| <i>monki</i> Bromley, 1934, <i>Ospriocerus</i>                          | <i>tequilae</i> Martin, 1968, <i>Ospriocerus</i>                     |
| <i>nigrolimbatus</i> Martin, 1968, <i>Stenopogon</i>                    | <i>terebratus</i> (Macquart), 1850 (Dasypogon), <i>Ospriocerus</i>   |
| <i>nigrum</i> Macquart, 1838, <i>Plesiomma</i>                          | <i>testaceum</i> (Fabricius), 1805 (Dasypogon), <i>Plesiomma</i>     |
| <i>nitens</i> (Coquillet), 1904 (Stenopogon), <i>Ospriocerus</i>        | <i>testaceum</i> Macquart, 1838, <i>Plesiomma</i>                    |
| <i>oaxacensis</i> (Martin), 1968 (Stenopogon), <i>Scleropogon</i>       | <i>texanus</i> (Bromley), 1931 (Stenopogon), <i>Scleropogon</i>      |
| <i>Obelophorus</i> Schiner, 1866                                        | <i>truquii</i> (Bellardi), 1861 (Dasypogon), <i>Stenopogon</i>       |
| <i>ortegai</i> Martin, 1968, <i>Stenopogon</i>                          | <i>unicolor</i> Loew, 1866, <i>Plesiomma</i>                         |
| <i>Ospriocerus</i> Loew, 1868                                           | <i>ventralis</i> Coquillet, 1898, <i>Ospriocerus</i>                 |
| <i>painterorum</i> Martin, 1968, <i>Ospriocerus</i>                     | <i>Willistonina</i> Back, 1909                                       |
| <i>petilus</i> (Martin), 1968 (Stenopogon), <i>Scleropogon</i>          | <i>Willistoninini</i>                                                |
| <i>Phellini</i>                                                         | <i>xochimilcae</i> Martin, 1968, <i>Stenopogon</i>                   |
| <i>Plesioma</i> Schiner, 1868, error                                    | <i>youngi</i> Martin, 1968, <i>Ospriocerus</i>                       |
| <i>Plesiomma</i> Macquart, 1838                                         | <i>zebra</i> Martin, 1968, <i>Stenopogon</i>                         |
| <i>Plesiommatini</i>                                                    |                                                                      |
| <i>rossi</i> Martin, 1968, <i>Stenopogon</i>                            |                                                                      |
| <i>salti</i> Bromley, 1929, <i>Plesiomma</i>                            |                                                                      |

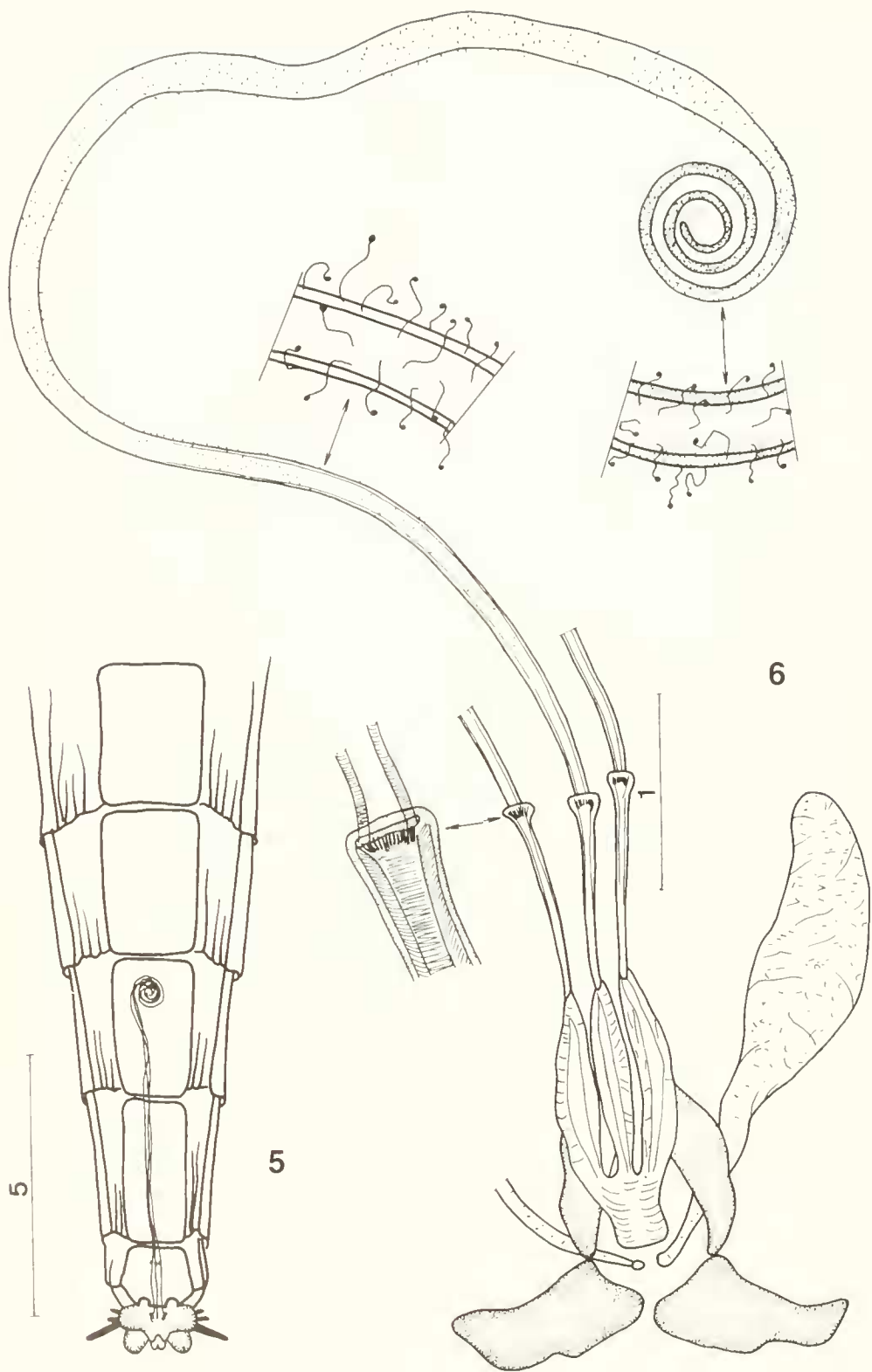


1-2. *Cystoprosopa semirufa* (Wiedemann). 1 situation of the spermathecae in the abdomen. 2 spermathecae.

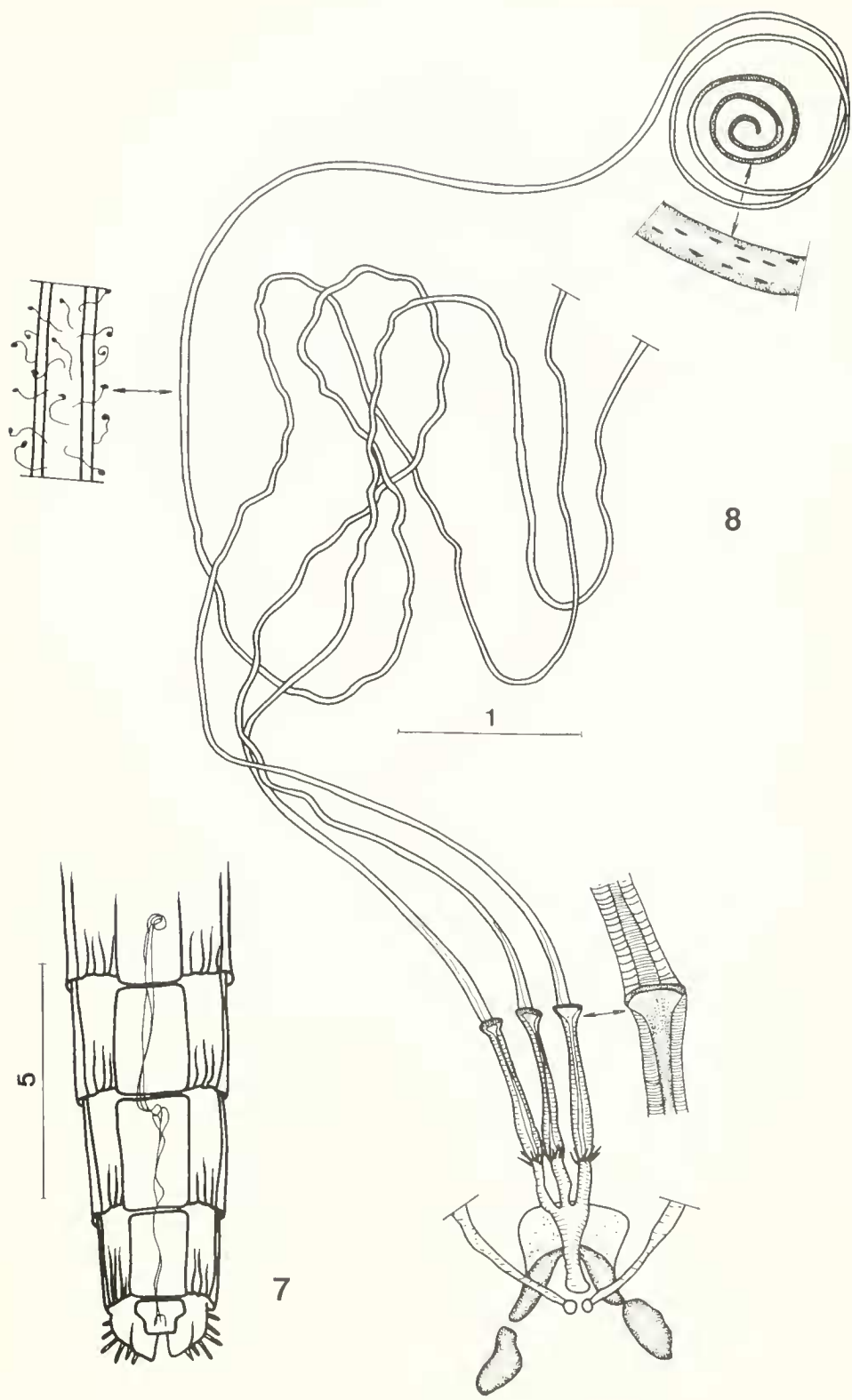




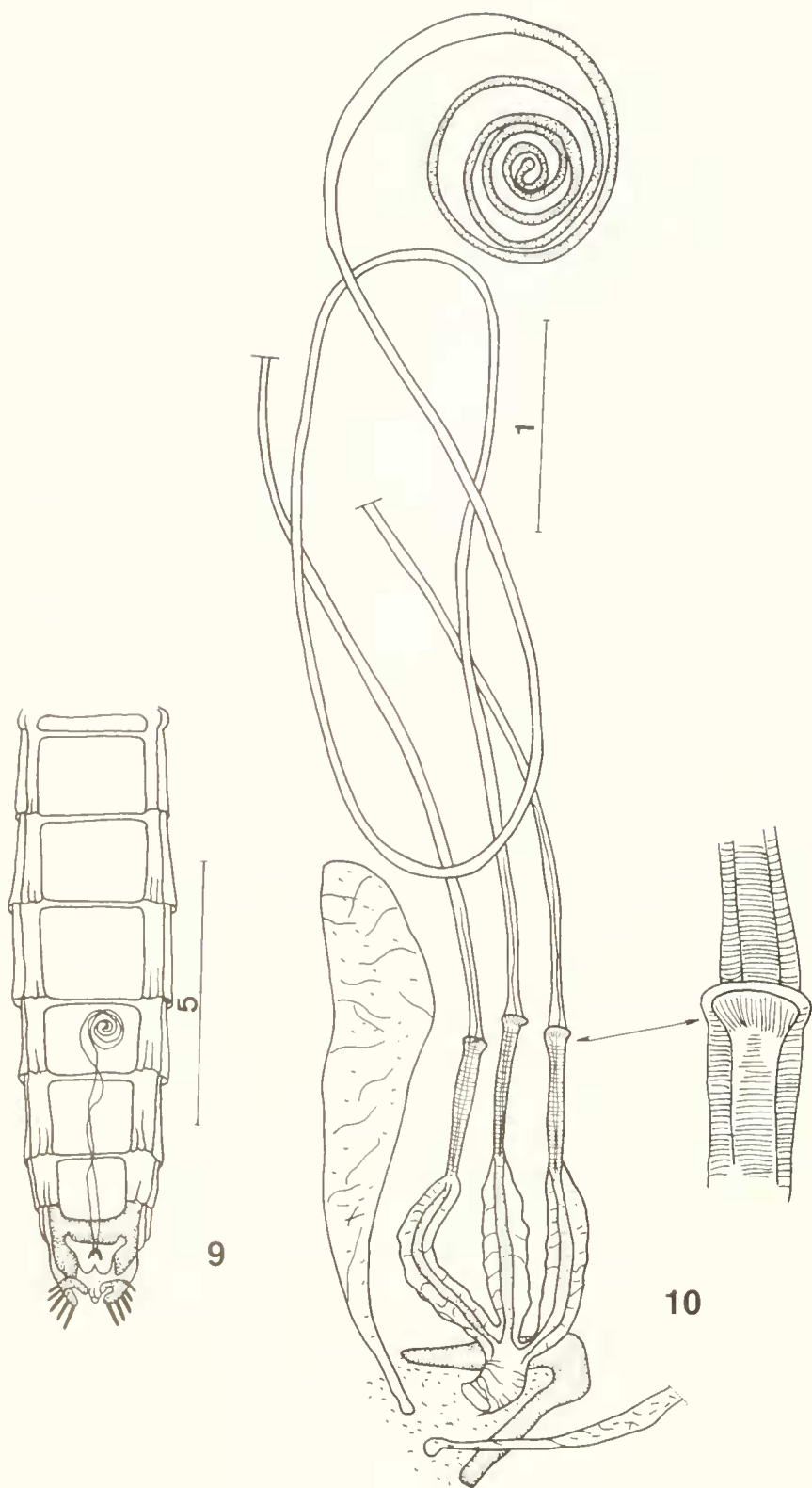
3-4. *Plesiomma ferrugineum* (Macquart). 3 situation of the spermathecae in the abdomen. 4 spermathecae.



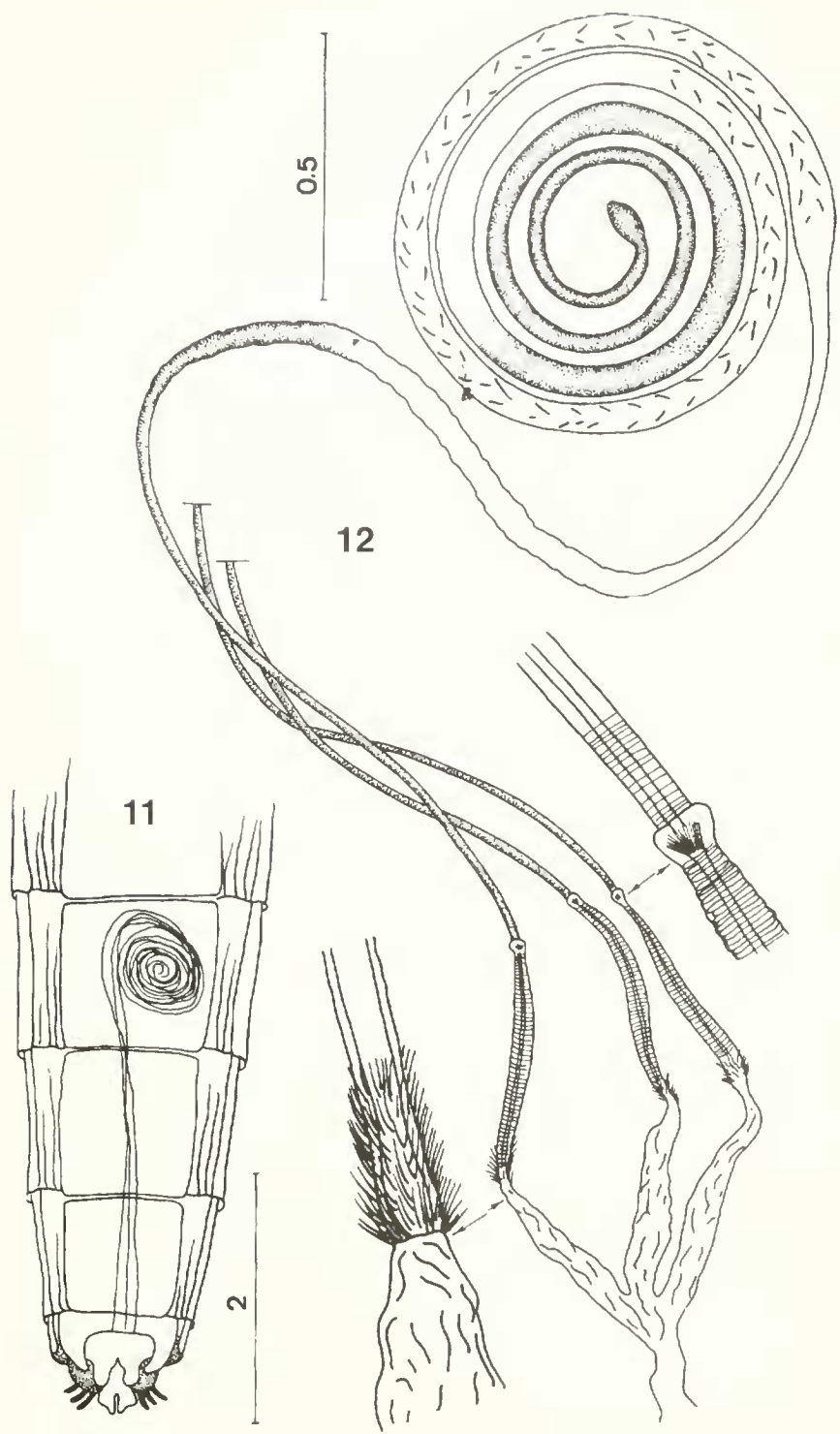
5-6. *Stenopogon inguinatus* Loew. 5 situation of the spermathecae in the abdomen. 6 spermathecae.



7-8. *Scleropogon consanguineus* (Brown). 7 situation of the spermathecae in the abdomen. 8 spermathecae.



9-10. *Ospriocerus abdominalis* (Say). 9 situation of the spermathecae in the abdomen. 10 spermathecae.



11-12. *Willistonina bilineata nigrifemorata* Wilcox. 11 situation of the spermathecae in the abdomen. 12 spermathecae.